The major challenge in designing this structure was to create a wood board and batten siding look with maintenance-free metal. The PAC-CLAD Snap-On Batten Panel achieved that look, but was not designed to be installed as siding. Petersen Aluminum was brought in to consult with the design team. An alternate attachment solution was found and approved through a mock-up of the siding. Lapping the panel system with alternating panels made it possible for M. Potteiger Inc. to accomplish an installation of this magnitude.

This large barn structure, designed by LSC Design Inc., was then capped with 42,000 sq. ft. of Charcoal SNAP-CLAD Panels, complete with two 30 foot cupolas topped with a 7 foot weathervane in the shape of a bear. This 4-story building serves as a retail store for Boyds Bear Collectibles, houses their corporate offices, a museum and a food court to accommodate large bus tours.

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Another Side of Louis Kahn

It's not often that I get a chance to write about films. But the recent release of the much-heralded documentary "My Architect: A Son's Journey" - whose subject is Louis I. Kahn, one of the giants of 20th century architecture - gives me cause to strike out in a different direction. This poignant film, which appeared earlier this year in Washington, D.C., is about the personal search of Nathaniel Kahn, the 41-year-old illegitimate son of one of the most revered architects to emerge from the modern movement. Louis Kahn's artistic legacy was an uncompromising search for truth and clarity, but his personal life was filled with secrets and chaos. He died penniless in the men's room at Penn Station, on his way home during the construction of perhaps his greatest architectural achievement, a capitol for Bangladesh. For two days, authorities in New York could not determine where Kahn lived, because he had scratched the address off of his passport.

With his death, Kahn left behind three families - one with his wife of many years and two with female colleagues with whom he'd had lasting affairs. Kahn's only son, Nathaniel, was the child of one of those relationships. In the film, he recounts the sporadic visits from his father, who apparently would arrive on short notice for dinner, sometimes stay to chat, then disappear quickly into the night. It was those fleeting glimpses of his father that compelled the younger Kahn to launch this odyssey. As he said in a published interview, "I didn't see much of my father's world - I just had a keyhole-sized glimpse of it. But what I saw of it was fascinating. You want to know about the man who came before you."

The backdrop of the film is Kahn's unparalleled architecture, photographed in a manner that conveys its transcendent qualities. Viewers are treated to fantastic views of the masterpieces - the Exeter Library, Yale Center for British Art, Salk Institute, and Kimball Art Museum. Along the way, a who's who of famous architects and historians offer candid recollections, notably Philip Johnson (interviewed at the Glass House, of course), I.M. Pei, and Moshe Safdie. Even crusty Edmund Bacon, who openly clashed with Kahn over plans for reworking the city of Philadelphia, makes a memorable appearance in which he blasts the elder Kahn's vision for the city as "totally irresponsible, totally impractical." Such is the reputation of idealists.

So compelling are the images that newcomers to Kahn's architectural genius will find much to appreciate. The film's narrative weaves in so many characters and so much human complexity that the occasional slow pacing is easy to bear. Unexpected moments of tension add an interesting twist - such as when Nathaniel arranges a meeting with his two half-sisters to discuss their father. It doesn't take long for the reunited siblings to start rehashing Kahn's funeral, which two of the children (and their mothers) attended in spite of being ordered not to come.

But "My Architect" is about far more than voyeurism. It's a film enriched by contradictions, mystery, and unresolved questions. Nathaniel Kahn embarked on a sincere mission, sometimes stumbling through his journey and other times hitting the mark with uncanny accuracy. As it flows along, the film raises uncomfortable issues - such as the human cost of artistic sacrifice. At various points throughout the film, the changing cast of narrators all but invite a negative judgment of Kahn for his treatment of employees, his attitudes toward women, and his nomadic lifestyle. Finally, in the last segment of the movie, it takes an interview with a Muslim architect in Bangladesh to offer a sympathetic, almost metaphysical, perspective of Kahn as the hero for an entire nation. Just what price Kahn, and the people who were closest to him, paid for his architectural accomplishments is ultimately left to the audience to decide. Was he great? Was he a failure? Or was he both?

-Vernon Mays
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Credit is Due
A new corporate headquarters campus for Capital One Financial Corporation by AI, of Washington, D.C., brings a welcome touch of urbanity to sprawling Tysons Corner and establishes a new icon along the Capital Beltway. By Edward Gants

Contextually Modern
A tough industrial site hemmed in by railroad tracks and a warehouse district yields a context-driven office building designed by Daggett & Grigg Architects, of Charlottesville. By Lisa Goff

The Green Scene
Charlottesville-based William McDonough + Partners has blazed the trail for a new generation of architects to design office buildings that are healthy, pleasant, and — most of all — more productive places to work. By Vernon Mays

Design Lines
new developments in design

Books
arguably the best of Paul Rudolph: the Florida houses

Taking Note
doing the small thing well

On the cover: Capital One Headquarters
Photo by Warren Kahle

In our next issue:
Inform Awards

architecture • landscape architecture • product design • decorative arts • historic preservation • interior design • visual arts • graphic design • urban design
A mother lode of large-scale aviation and space artifacts are now seeing the light of day at the Steven F. Udvar-Hazy Center in Chantilly, which opened in December. A companion to the National Air and Space Museum on the Mall in Washington, D.C., the center welcomed its first visitors two days in advance of the 100th anniversary of the first powered flights by the Wright brothers.

The Washington office of Helmut, Obata, and Kassabaum (HOK) created the center with inspiration from Eero Saarinen’s nearby Dulles International Airport, borrowing as well from the legacy of zeppelin hangars built on the nation’s coasts during the ’30s and early ’40s. Visitors enter after passing by the 70-foot-tall “Ascent,” a work by McLean sculptor John Safer, and 64 silver donor plaques, which are set at an angle to evoke a sense of movement and flight. The dramatic steel-and-glass gateway into the building mimics the shape of a fuselage. Ten stories high and the length of three football fields, this immense hangar houses three levels of aircraft, two of which are suspended from a series of arched trusses positioned to recall characteristic flight patterns.

Extending from the central building is the James S. McDonnell Space Hangar, which makes a dark enclosure around space artifacts, in contrast with the white “sky” over the aircraft. This hangar is visible, but for the time being closed, as the space shuttle inside is refurbished.

The 164-foot-tall observation tower announces the complex from afar and serves as its icon. Its sixth-floor deck allows visitors a bird’s-eye view of planes banking into and away from Dulles. One floor below are displays replicating equipment used in control towers. In addition, an IMAX theater, food service, gift shop, and classrooms occupy entry-level space on both sides of the entrance volume.

More than 200 aircraft and 135 large space artifacts will eventually be displayed at the center. Nearly half that number were installed for the opening, including the SR-71 Blackbird, the fastest airplane ever built; the Air France Concorde, the first Concorde acquired by an American museum; the B-29 Enola Gay, which dropped the atomic bomb on Hiroshima; and the space shuttle Enterprise, which was used for testing.

“This facility is all about looking at these wonderful artifacts in unusual and new ways,” says project architect William K. Hellmuth, AIA, of HOK. “The three levels of walkway show off these artifacts from different vantage points.”

Entirely funded by non-federal sources, the $311 million center was named after top donor Steven F. Udvar-Hazy, president and chief executive officer of International Lease Finance Corporation, a commercial aircraft leasing company. The Commonwealth of Virginia provided the site infrastructure and roadway improvements, which were designed to accommodate up to 3 million visitors annually.

The addition of this facility to complement the Air and Space Museum on the Mall dramatically increases the public’s access to aeronautical and space artifacts, as the institution continues to fulfill its mandate to collect, preserve, and display aeronautical and space flight equipment of historical significance.

— Rebecca E. Ivey
Boynton Assumes Helm at NCARB

A longtime passion for the regulatory issues that affect architects has been rewarded for Richmond architect Robert A. Boynton, FAIA, who last summer assumed the role of president of the National Council of Architectural Registration Boards (NCARB). Boynton, a principal of Boynton Rothschild Rowland Architects, was formally elected president of NCARB at its annual conference in San Antonio, Tex., in July.

Since the early 1990s, Boynton has participated actively in the leadership of NCARB, which assists all the state registration boards across the country in carrying out their duties and provides a certification program for architects. Prior to his election as president, Boynton served as the council’s secretary, second vice president, and first vice president. His participation on committees, such as the Member Board Administrator’s Committee and the Committee on Professional Conduct, led to his election to the Council’s Region 2 Conference, representing the mid-Atlantic states.

In a letter to NCARB members distributed last fall, Boynton outlined his plan to improve the Architect Registration Exam, encourage reciprocity between states, provide Web services, and cultivate collateral relationships. “We want to reduce and eventually eliminate reciprocity impediments between jurisdictions, which include the fifty states and five U.S. territories,” Boynton says. “Another goal is making mobility for architects seamless, both within the U.S. and internationally.”

On his journey to election as president, Boynton became a record-setting public servant, having served five different terms as chair of the Architect Section of the Virginia Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers, and Landscape Architects. He is the first person to have been appointed to the board by three different governors. Active in the AIA since 1969, Boynton has been president of the Virginia Society AIA, as well as vice president of the Virginia Foundation for Architecture. In addition, he has served as regional representative to the AIA College of Fellows, and has won numerous service awards.
The Virginia Foundation for Architecture exists to enrich the human experience through a broadening awareness of architecture and its impact on our lives. With the development of the Virginia Center for Architecture at the Branch House, the Foundation presents an architectural museum offering exhibitions and programs to engage visitors, expanding outreach efforts begun with its support of Inform magazine and creation of scholarships for architecture students. The Foundation acknowledges with appreciation those who supported its efforts in 2003.

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Virginia Schools Earn VSBA Recognition

Four projects were recognized as outstanding examples of educational design at the November meeting of the Virginia School Boards Association in Williamsburg. Looking for creativity, innovation, and cost-efficiency, the selection panel elevated three public schools and one private school from a field of 20 entries.

The winners included Appomattox Elementary School, which accommodates 600 third- through fifth-grade students from Appomattox County. The building consists of three identical classroom wings extending from a curved circulation spine. VMDO Architects, of Charlottesville, located the building to maximize natural ventilation and take advantage of the southern exposure, providing the school with passive solar heating.

The John M. Langston Continuation High School in Arlington, designed by BeeryRio Architecture + Interiors, of Springfield, was recognized for its unique architectural program, which combines a continuing education high school, a Head Start program, and a community recreation center in a single facility. The building received a LEED silver rating in 2003, the first in Virginia, for its sustainable elements. They include facilities that minimize water consumption, passive heating and solar shading features, and van, carpool, and bike storage areas to encourage alternative means of transportation.

Moseley Architects, of Virginia Beach, was recognized for the Advanced Technology Center in Virginia Beach, the result of collaboration among Virginia Beach Public Schools, Tidewater Community College, and the City of Virginia Beach. The building is zoned into "technology clusters" to share resources among the three institutions. The center is organized around a "smart student street" that penetrates the building, allowing views into technology labs and reinforcing the emphasis on community and technology.

North Cross School in Roanoke, the only private institution recognized, received an award for Slack Hall, an adaptive reuse project. Architects Rodriguez Ripley Maddux Motley, with offices in Norfolk and Roanoke, transformed an old gymnasium into a dining and performing arts center.

Awards were presented to the John M. Langston Continuation High School in Arlington (left) and Virginia Beach Advanced Technology Center (above).
The speed at which architecture evolves can be exhilarating, even intimidating. What is a designer to do to keep abreast of the rapidly changing world in which he or she practices? A weekly check of an informative and timely site known as archweek.com might do much to keep you afloat.

Architecture Week serves as a weekly source of in-depth articles, while providing a feed that reels off breaking design news. With a lead story on its homepage, a host of links, and the animated news feed, the site gives a first impression of focused reporting that promises a gold mine of information to the eager explorer. What you encounter after this, however, depends on how you navigate the site.

Skip the links under “and more” on the right side of the home page, which lead to a scattering of calendar events and an awfully uninspiring forum. A better method of moving about is through the links along the bottom of the homepage. Using these, you can explore a filtered news section that provides in-depth, focused coverage (in contrast with the snippets of the news feed), along with sections on building technology, design tool reviews, sustainable design, and culture. One recent edition, for example, included case studies of eco-houses in India and Wales, and “Postcard from Peru,” an illustrated account of a British designer’s bicycle tour through vernacular Peru. Interesting and fact-filled, the articles in these sections round out the site with a welcome breadth of information.

The site has obvious links to other sister-sites, some strong, such as greatbuildings.com—a conceptive database of buildings, architects, and locations—and some less so, such as designcommunity.com, the aforementioned forum. Nonetheless, using these as extra resources, it’s easy to surf through an extraordinary amount of information and opinion from a single portal—no need to cull from the pages of a search engine.

Perhaps just as useful is the weekly newsletter available to anyone who provides an e-mail address—since having information sent your way is much easier than looking for it on your own. For architects wanting to brush up on developments in architecture and design, archweek.com may be the just the ticket. Grade: A-
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Credit is Due

A new corporate headquarters campus for Capital One by Ai, of Washington, D.C., brings a touch of urbanity to sprawling Tysons Corner. By Edward Guntz

In the notoriously congested edge city of Tysons Corner, a new corporate headquarters campus brings a touch of urbanity to an area long known for suburban sprawl. Its first phase, a 14-story office building – designed by Ai of Washington, D.C. – is one of the most prominent and intentionally iconographic structures to rise along the Capital Beltway since the Mormon church completed its Washington Temple 30 years ago. As drivers round a bend in the road, the building’s curving form suddenly fills the windshield – a reflection of the company’s own emergence as a financial powerhouse.

Capital One Financial Corporation, one of the nation’s largest issuers of credit cards, is the owner and sole occupant of this 580,000-square-foot headquarters. Established in 1995 as a spinoff of Signet Bank, Capital One wanted a headquarters where it could consolidate 1,000 employees spread among five northern Virginia locations, plus gain room for expansion. Its executives sought a signature building that would symbolize the firm’s increased presence in the region and meet strict standards for sustainability, while providing the flexible environment and range of amenities needed to attract the best employees.

After considering half a dozen sites, Capital One chose a 28-acre tract bounded by the Capital Beltway, Route 123, and Scotts Crossing Road. The triangular parcel fell within Westgate Office Park – part of the first generation of commercial development in Tysons Corner. With several older low-rise buildings slated for demolition, Westgate’s owners marketed the site for higher-density development.

Capital One liked the location’s proximity to the talent pool in northern Virginia and its high visibility to motorists. In addition, the site adjoins land that has been identified for a much-needed stop on Washington’s MetroRail system – another selling point. The challenge for Ai was to take site characteristics that some would consider liabilities and turn them into assets for the company and its growing, knowledge-based workforce.

Working with landscape architects EDH Inc., the architects developed a master plan for a 1.3 million-square-foot campus consisting of four office buildings and companion garages that can be constructed as Capital One needs them. The plan calls for three seven-story structures, each with 200,000 square feet, aligned on a monumental entrance drive. Commanding the view along this
Curved glass-and-aluminum curtain wall (above) blends with large fin to make a sculptural form along the Capital Beltway (right).

Two-level “main street” flows past lobby (above) and into coffee shop.
new road is the 14-story first phase, connected to a nine-story garage. When completed, all four office buildings will be linked by an enclosed pedestrian “main street,” which ties into the first building’s lobby. The initial building also has 120,000 square feet of support services space at its base, including a conference center, fitness center, concierge, cafeteria, art gallery, bank, and coffee shop.

Though common elsewhere in the region, this campus approach brings a human scale and walkability not often seen in Tysons Corner, where buildings are typically isolated, car-oriented developments. The campus concept works well with the proposed Metro stop. But it also placed heavy design demands on the first building, requiring it to anticipate its role as part of an ensemble, yet stand by itself until later phases come along.

The master plan situated the building on a pivotal spot where the beltway’s northbound and southbound lanes split. The north lanes arc gently around the site, while the south lanes appear to head straight toward the building at one point, providing a direct view of its broadest side for those driving in from the Dulles Access Road. Ai sculpted the building’s form to take best advantage of this perspective, testing more than two dozen compositions in model form before arriving at the final shape.

Both architect and client wanted a building that would make a strong impression and reinforce Capital One’s image as a high-tech marketing firm. According to Ai principal-in-charge David Haresign, AIA, and senior associate Steven Kahle, AIA, company officials wanted to avoid a tradition-bound solution that might paint the corporation as stodgy. “They think of themselves as a dynamic firm, using technology to stay nimble in a highly competitive industry,” says Kahle.

The resulting design is multi-layered. Part of it is rectilinear in form and clad primarily in precast concrete – a reference to the traditional institution from which Capital One grew. This conventional building fragment gives way to a curving shape with a glass and metal skin, as if to suggest the company has moved beyond its beginnings and morphed into a more progressive entity. The rectilinear portion is visible from the campus drive and entry court, while the gleaming free-form portion demands attention from southbound drivers – more a symbol of the company it has become. Passersby never get a complete sense of the building from any one angle, Haresign says. “It’s ever-changing.”

To make the building stand out, the designers received zoning approval to increase its height from the maximum allowable 150 feet to 190 feet. They also integrated the rooftop mechanical penthouse with the body of the building, creating a finlike screen that gives the building a distinctive top and accentuates its verticality.

Beyond these external factors, the building represents a response to internal program requirements of function, flexibility, and indoor environmental quality. The clear-span structure has a typical floor plate of 35,000 square feet. Its office floors were based on a universal planning approach that allows employees to relocate based on work assignments without requiring their offices to be reconfigured. This approach maximizes the number of floors with the same configuration of offices, workstations, and support spaces. On most levels, work areas requiring fixed walls were located toward the center of the building so the perimeter would be available for circulation, giving each employee some exposure to natural light and views.

The building skin consists of highly detailed aluminum curtain wall and precast...
Typical Floor Plan

Highly detailed curtain wall (above) uses floor-to-ceiling glass to maximize daylight inside. Ground floor interior (below) includes a bank and art gallery.

First Floor Plan
1. Car Dropoff
2. Vestibule
3. Reception
4. Office Space
5. Coffee Shop
6. Mechanical/Electrical
7. Switchgear Room
Two-story volume contains a coffee shop and outdoor cafe on ground level and meeting space above.

Concrete systems with floor-to-ceiling glass. A highly efficient underfloor air distribution system maximizes indoor air quality and flexibility in office layouts. Even in the open office spaces, lights are controllable by individual users. Both the lights and mechanical systems are monitored and controlled by an automated system that optimizes energy efficiency.

Capital One used the U. S. Green Building Council's Leadership in Environmental Engineering and Design (LEED) guidelines as a benchmark for its sustainable design initiatives. They include minimizing the footprint of the headquarters building, constructing garages instead of surface parking, creating two landscaped parks, and designing a pedestrian bridge to the Metro platform.

Prior to Capital One’s arriving, the site had been substantially paved with surface lots. Zoning required that 15 percent of the land be kept as open space. But when Capital One’s campus is complete, 45 percent of the land will be open space—a change that significantly reduces stormwater runoff and the negative environmental effects of heat islands.

Strategies to reduce energy consumption include high-performance glazing that minimizes need for artificial light and touchless lavatory fixtures for water efficiency. More than 60 percent of the building materials and components were manufactured in the region, reducing the fuel consumption associated with transportation. And all of the concrete poured in the first phase—representing 65 percent of the construction—was mixed on site.

Ultimately, Capital One’s headquarters is a statement of optimism that, even though northern Virginia is growing denser, the quality of work environments there need not suffer. Just as Capital One is responsive to consumers, its headquarters demonstrates that architects and land planners can satisfy clients’ expansion needs while remaining responsible in addressing regional growth concerns.

Edward Giants is the architecture critic of The Baltimore Sun.

Project: Capital One Financial Corporation, McLean
Interiors and MEP Engineering: Ai Consultants: Rathgeber Goss Associates (structural); William H. Gordon & Associates (civil); Lerch Bates (elevators); CDC, Inc. (curtainwall); Greavic (parking); Miller Henning (acoustics); Gallagher & Associates (signage); EDAW (landscape architecture); Illume Creatif (lighting); SecuraComm (security); Shen Milson & Wilke (audiovisual)
Primary Contractor: Davis Construction
RESOURCES
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Office layouts place circulation spaces around the building's perimeter and private offices toward the center of the floor plate.

Whimsical furniture lends a playful air to the coffee shop.
A tough industrial site with great potential yields a contextually modern office building by Daggett & Grigg of Charlottesville. By Lisa Goff

Few years back, the corner of 10th and Market streets in Charlottesville was the kind of site architects dream of—an expanse of empty land a stone's throw from downtown. It enjoyed magnificent views of Monticello and the surrounding mountains, but it also posed career-making design challenges. Hemmed in by railroad tracks and an industrial district, the sloping site lacked a pedestrian link to downtown and faced a visually tedious, block-long parking deck. In truth, even the view of Monticello was compromised by a large coal tower.

Environmental issues associated with brownfield cleanup and limited access to downtown discouraged real estate developers from taking on the site, a former C&O Railroad yard. But in the late 1980s a plan to build a concrete batching plant on the land galvanized local officials. Alarmed that a site with the potential to extend the downtown commercial district might be lost, the city exercised an obscure agreement with the railroad giving it the first right of refusal to buy the property. The city and its Industrial Development Authority bought the land, and spinning designs for
The building’s brick exterior (above) recalls the nearby loft district. Colorful patterns lend a modern twist (below).

Modern detailing in the architect’s office gives the interior a loft-like feeling.

The future development of the site soon became a favorite pastime of the local architecture community.

“Every architect in town has done a dozen plans for this property, including us,” says architect Bill Daggett, AIA, a principal of Daggett & Grigg Architects, of Charlottesville. The city made road improvements to connect 10th Street to major traffic arteries, which divided the site in half and spawned, on its western portion, a new headquarters building for the Michie Company, a law publishing company. The continued success of Charlottesville’s downtown mall and talk of building a new bus transfer station on the end of the mall nearest 10th Street sparked interest in developing the balance of the property. Daggett & Grigg was hired to design an office building for the site and, along with the mechanical consulting firm 2rw Consultants, agreed to purchase the second floor to use as its own offices. That commitment helped the developer obtain financing for the 33,000-square-foot speculative office building known simply as 100 10th Street.

But there were more obstacles to be cleared. The site excavation turned up soft spots in the earth and a spring flowing through...
An open floor plan contributes to the warehouse aesthetic.

the middle of the property. A century’s worth of cinder and fly ash had to be cleaned up. Meanwhile, Daggett and partner James Grigg, AIA, struggled to design a contextual building that would yield maximum square footage and hide its own parking lot. “Philosophically we were committed to a design that crossed traditional and modern boundaries, showed that both were valuable – and compatible,” Daggett says.

The partners made a virtue of the sloped site by tucking structured parking beneath the building and placing a surface lot behind, which hides views of the cars from the street. Inspiration for the exterior design was found in the red-brick warehouses that lined Charlottesville’s old commercial district on nearby Water Street. Jack arches, cornices, and flashed brick on the exterior of 100 10th Street echo those 19th-century loft buildings, many of which have been renovated for commercial and residential use.

“You see traditional influences of context, scale, and proportion, but we’ve tried to be innovative in the ways we’ve interpreted the forms,” says Daggett. The brick exterior was a cost-effective way of recalling the warehouse district and the region’s Jeffersonian legacy. But colorful brick detailing — bluish “Dark Iron spot” and salmon-shaded “Old Williamsburg” — create an articulated façade that interprets classicism in a modern way.

The architect’s 5,000-square-foot offices continue the industrial metaphor with open floor plans and contemporary materials such as birch and steel. A customized lighting system “speaks the indelicate warehouse aesthetic,” Daggett says, with industrial-sized threaded steel bolts supporting translucent white polycarbonate trays. Several tenants in the building have mimicked Daggett & Grigg’s loft style, while others have gone with a more traditional polished-mahogany-and-drop-ceiling look. “The building can accommodate both approaches,” Daggett allows.

From the beginning, the building was designed as an anchor for its transitional neighborhood — a zone where the office buildings and storefronts of downtown give way to industrial buildings.
and single-family residences. But, for all the emphasis on streetscape, 100 10th Street doesn’t see much foot traffic. “There are barriers that psychologically disconnect us from downtown,” admits Daggett. “It’s a smoother transition in a car.”

That could change, however. Construction of the new bus transfer station will permanently close 7th Street to traffic, making 10th Street the main cross-street for vehicular traffic on the east end of the mall. “It extends the mall to our front door,” says a gleeful Daggett. Meanwhile, a large residential loft is under construction just across the railroad tracks, and Daggett says there is renewed interest in developing a parcel next door on 10th Street. Even the coal tower has been transformed from an eyesore into a romantic landmark, the scene of local theatrical productions and art exhibits. Says Daggett: “I feel like we’re in the center of future development.”

Lisa Goff is a Charlottesville freelance writer.
The Green Scene

Charlottesville-based William McDonough + Partners has blazed the trail for a new generation of architects to design office buildings that are healthy, pleasant, and – most of all – more productive places to work. By Vernon Mays
The firm's partners include, left to right, Diane Dale, Russ Perry, William McDonough, Kevin Burke, and Allison Ewing. Their headquarters for Aspect Communications (facing page) embraces a landscaped courtyard.

To approach the nondescript brick building on Jefferson Street in Charlottesville's downtown, one is hard pressed to recognize that a global revolution is brewing inside. But, just a few feet away in the second-floor studios, nothing less than a total transformation of the industrial mindset is in the works at William McDonough + Partners.

Already an impressive number of U.S. corporations have cleaned up their acts and improved their employees' lives as a result of the sermons that environmental evangelist McDonough delivers coast to coast. And, while McDonough's ultimate goal is to make sustainable design an integral part of every decision that architects, government agencies, and private companies make, it has been in the realm of corporate offices and manufacturing buildings where he has made his most rapid impact.

Corporations from furniture-maker Herman Miller to auto manufacturer Ford Motor Company to hip clothier The Gap have taken McDonough's message to heart, in each case making—or remaking—facilities that, in comparison to their counterparts of old, are gentler to the landscape, less consumptive of natural resources, and healthier for their workers to occupy. McDonough wins their ear not by spreading guilt, but by appealing to their business sense and demonstrating that commerce and consumption are the engines of change.

"Growth is good," McDonough is known for saying. "The question is, what are you growing? Stupidity or intelligence? Sickness or health? Poverty or prosperity?"

From the time that he staked his professional future on environmental issues, McDonough cultivated a provocative
The building is configured to embrace the light, air, and water of the outdoor environment (top). Operable windows allow fresh air into the space when it is desirable (below).

**Aspect Communications**

San Jose, California

Linking old building and new with a central courtyard, this 110,000-square-foot headquarters expansion for Aspect Communications transformed an ordinary office building into a vibrant, connected place that cultivates community and collaboration. By deftly balancing intimacy and openness, the design offers an expansive interpretation of the California mission cloister and revitalizes the relationship between building and landscape.

Market conditions dictated the decision to build-to-suit - at about half the cost of leased space in the Silicon Valley at the height of the technology boom. The transformation of its corporate home enabled Aspect to offer amenities not just to its employees, but also to its evolving client base, whose trust can be cultivated through new state-of-the-art customer training facilities.

Throughout the building, which was completed in 2001, the design uses abundant daylight, fresh air, and access to views to connect people with nature. The paired three-story wings break the mass of the building into smaller units, while creating sheltered space for the sun-filled courtyard - a place where workers and guests meet for planned discussion or chance encounters.

Promoting the health and well-being of the occupants was high on the designers’ priority list. High floor-to-ceiling dimensions create...
The office building was planned as two smaller wings to place occupants closer to natural light and fresh air.

a loft-like space, and high-performance low-e glass mitigates heat gain while admitting ample light. Narrow floor depths enhance daylighting by placing people close to windows — some of which open to allow temperate breezes to flow through. An underfloor air distribution system, the first of its kind in the Silicon Valley, provides fresh air directly to each worker. In essence, the building operates like a giant hacienda, using convective airflows to stratify warm air, dust, and toxins away from people.

Materials were selected on the basis of their aesthetic, functional, and sustainable qualities. Rather than relying on fireproof coatings that adversely affect indoor air quality, for instance, the design presents alternative fire protection solutions that allow the building's structural steel to remain exposed. Cafe booths and the fitness floor are made of sustainably harvested wood; break area floors are composed of recycled carpet backing. Bio-composite concrete countertops make use of recycled newspapers. And carpets and fabrics are fully recyclable.

Landscape strategies give primary consideration to water conservation. The design includes a sophisticated irrigation system using temporary measures for the native areas, rain sensors, and an overall drought-tolerant plant palette. The reflecting pool and runnel also function as an overflow component of the stormwater system.

Architect of record/interiors: Form4 Architects, San Francisco
Design landscape architect: Nelson Byrd Woltz, Charlottesville
Landscape architect of record: April Phillips Design Works, Sausalito

speaking style to keep his message fresh. He frequently challenges American businesses to “use current solar income” and “respect diversity” while he champions the coming of the Next Industrial Revolution.

Spreading his utopian view with catch phrases such as “waste equals food,” McDonough has drawn the attention of publications including Time magazine, which named him one of its “Heroes for the Planet,” and Metropolis, which plastered his face across its cover along with a banner headline that read, “Go Green.” He embarked on his environmental crusade during graduate studies at Yale, when he designed and built the first solar-heated house in Ireland. By the time he was hired in 1985 to design the New York headquarters of the Environmental Defense Fund, the term “sick buildings” had come into currency. McDonough was warned he would be sued if the new offices made any of the organization’s employees ill. The threat prompted his first experience with stonewalling manufacturers who refused to divulge the chemical makeup of their products.

McDonough’s profile was boosted in the early 1990s with his consultation on the design of an environmental prototype Wal-Mart store. His design guidelines for the 2000 World’s Fair in Hannover, Germany, proposed that the pavilions representing each country remain at home and be linked instead by the Web. By 1994, he had won a competition for The Gap headquarters in California.

Later that year, he was named dean of architecture at the University of Virginia. The next year, in concert with German chemist Michael Braungart, he formed a spinoff company called McDonough Braungart Design Chemistry, whose mission is to develop environmentally safe products and systems. Soon afterward, McDonough and Braungart teamed with a company named DesignTex to create a line of fabrics made with biodegradable fibers and re-engineered chemical processes. As McDonough quipped: “They are so safe you can eat them.”

When his 5-year term as dean ended, McDonough kept his office in Charlottesville, where several of his New York employees had moved with him. Today the firm is operated by five people: McDonough is the founding partner, and continues to have a hand in the design of each building. Once he helps set the direction, one of the other partners follows each project through to completion. They are managing partner Russell Perry, AIA; design partners Kevin
Burke, AIA, and Allison Ewing, AIA; and Diane Dale, ASLA, a landscape architect and attorney who serves as the firm's director of community design.

Perry says the practice is not much different from other architecture offices, except that the pace of work is fast— and usually focused on the front end of the design cycle. "It's the high valued-added, creative phase of the work," he says. Then, because most of McDonough's work is located in distant places, the successive phases of detailing and construction oversight are handed off to associated firms in the project's home city.

McDonough's large-scale community development projects are taking his staff to exotic locales such as Hawaii and China. Another project in the works involves a collaboration with Sir Norman Foster on a facility for the National Museum of Science and Industry in the U.K. And a cutting-edge, mixed-use project in Barcelona redefines an urban site and features a trademark "green roof" to absorb rainwater and produce oxygen.

But it is the work for America's captains of industry that is getting the most attention. Office buildings for Herman Miller, The Gap, Nike Europe, and Aspect Communications have made a virtue out of corporate campuses that embrace the landscape, rely on natural illumination, and celebrate fresh air.

The biggest catch for McDonough has been the Ford Motor Company, which hired his firm to remake the original Rouge River plant begun in 1927. McDonough has led the planning of a $2 billion environmental makeover that will take 20 years to complete. Included in the transformation: a 600,000-square-foot assembly plant with skylights and a planted roof.

The initiative is one of five projects whose stories are told in "The Next Industrial Revolution," a 55-minute film documenting the work of McDonough and Braungart. Screened recently for a small group in Norfolk, the film delves deeply enough into each story to lend an appreciation for his intelligence, tenacity, and vision.

McDonough's efforts to encourage healthy building materials and conduct research at the scale of the molecule have opened the door for a new generation of practitioners. Their opportunity: to break the old consumptive habits of the first Industrial Revolution and, instead, step into the sustainable world of the next Industrial Revolution.

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**Nike European Headquarters**

*Hilversum, The Netherlands*

Located within the central lawn that is built atop underground parking, the rectangular pool doubles as a seasonal skating rink.

With one of the most recognizable corporate identities in the world, Nike wanted to reinforce its focus on world-class athletic performance and achievement on the campus of its European Headquarters. This 375,000-square-foot complex became the first unified home for employees previously scattered throughout northern Europe.

With the central goal of creating a pleasant, invigorating, and active work environment, William McDonough + Partners also intended to create one of the most energy-effective offices of such a size in The Netherlands. Ecologically speaking, the building materials include lumber from certified forests, local "buckwheat" bricks, and virtually no PVC. With one of Europe's largest ground-source heat pump systems, and the largest rainwater harvesting system in northern Europe, these innovative systems have contributed to the campus' success as a model of energy-efficiency. Operating on only 49,000 BTUs a year, 30 percent coming from renewable sources, the campus is slated to become even more efficient when photovoltaic panels are installed on roofs, which were located to optimize solar energy collection.

On-site sports facilities, restaurants, and public green spaces encourage athleticism and have measurably minimized absenteeism. Narrow floor plates and spans of glass open the interiors to views of the surrounding courtyard, while skylights, light monitors, and four-story atria distribute daylight throughout the interior.

To maximize green space, an underground parking facility is capped with a green roof that doubles as the central lawn, a gathering place for employees. An exercise track wraps sinuously around multiple buildings, while gardens are interspersed among the sport areas to provide moments of quiet. The design employs a wood frame-and-glass canopy, which caps the central courtyard. The final result of the novel technologies, combined with an open, but connected workplace sprinkled with sporting facilities, reflects Nike's commitment to its employees, as well as to the environment.

**Architect of record:** B&D Architekten B.V., Oosterbeek, The Netherlands

**Landscape architect:** Nelson Byrd Woltz, Charlottesville
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The Gap, Inc. aspired to create a work environment in which their employees could thrive, feeling as if they had spent the day outside. In addition, sustainability, cost-effectiveness, and spatial flexibility ranked high in the programmatic scheme. William McDonough + Partners collaborated with the design team to mold the offices into the hills above San Francisco International Airport, at the same time opening the building to the natural lighting, heating, and cooling forces of the environment.

The 195,000-square-foot building, completed in 1997, is the first phase of a planned 461,000-square-foot complex. To minimize its mass and impact, the building has an undulating roofline that mimics the hilly terrain. Lost green space is replaced with a roof covered in native grasses and wildflowers, recreating the surrounding coastal savannah ecosystem. Using convective patterns and the daily heating and cooling cycles of the Bay Area, cool night air is drawn across a concrete slab within the raised floor, effectively charging a thermal battery that cools the building throughout the day.

Banks of glass allow light and views of the surrounding landscape into public areas, and light monitors deliver daylight from interior courtyard atria to surrounding workspaces. Augmented by computerized lighting
Gap Inc.

Gently curved roofs covered in native species blend into the environment and replace green space.

systems as necessary, the savings from natural lighting strategies are scheduled to pay for the advanced technology in only six years. Fresh air is constantly pumped directly to the breathing zone, minimizing stuffy interior conditions. The open views, infusions of light, fresh air, and connection with the natural world help cultivate a less tangible benefit – employee satisfaction.

Proving its flexibility, the offices had to be reconfigured for more than 700 staff immediately prior to occupancy, rather than the planned 260. This process took a single day. Elements such as the raised floors allow quick, low-cost changes in workplace configuration. This flexibility was initially proposed in order to facilitate reorganization of workspaces from project to project, as well as to create a sense of camaraderie and fairness among different classifications of employees.

Executive architect/interior design: Gensler, San Francisco
Landscape architect: Hargreaves Associates, San Francisco
In 1953 Paul Rudolph, then 35 years old, was "the most important architect...in the U.S. and probably the industrialized world" according to critic Peter Blake. This acclaim began with small vacation homes, the subject of a handsome new volume, *Paul Rudolph: The Florida Houses*. Rudolph went on to prestigious commissions, many in New England, that eclipsed the houses: the Jewett Arts Center at Wellesley College, Blue Cross Blue Shield in Boston, Southeastern Massachusetts Technological Institute near New Bedford, and the Art and Architecture Building at Yale University, where he became chairman of the architecture department. The Florida Houses offers fresh reconsideration of Rudolph's early - and arguably best - work, covering 60 projects from 1941, the year he arrived in Sarasota, to his 1962 departure for the Northeast. The authors let the houses speak for themselves through Rudolph's drawings and Ezra Stoller's photographs. The drawings portray the architecture with remarkable clarity, in roof-removed aerials that favor massing and in cutaway perspectives with low points-of-view that favor the section. Rudolph was the great architectural perspectivist of his time, a prolific source of arresting drawings that remind one of Wright, a kinship also evident in the buildings. They reveal a teacher's insistence on lessons and care for construction over easy picture making. Magazine-ready graphics boosted his career in an image-hungry system, and still reproduce beautifully in print.

Stoller's black-and-white photos, here printed in abundance in full-bleed duotones, are works of beauty in themselves. They emphatically portray Rudolph's architecture in harmony with the mangrove swamps, tropical light, and easy living of mid-century Sarasota. Robert Bruegmann's fine introduction begins the book with an appreciation of Stoller, through whose eyes we see these houses, in particular his portrait of the Healy Guest House. Stoller depicts a sensuously beautiful place conjoining art, life and nature, much more than a photo of an architectural object. Architect, draftsman, and educator, Rudolph was foremost a maker, and superb buildings of simplicity, rigor, and lightness grace this book. Expressive in materials and assembly from frame through to detail, on elegant pared-down plans, these houses celebrate sensual delight through texture, shadows and light, and connection to place. They reveal Rudolph's architecture as an exploration, through the hard work of building, of ways out from the ideological and formal dead ends of International Modernism, a quest shared by other leading architects of his generation.

Two essays organize Rudolph's houses into two distinct periods. First, Christopher Domin covers Rudolph's work with architect/builder Ralph Twitchell, a partnership that lasted until 1951. Promoting Modern design ideas to Twitchell's open-minded Sarasota friends, they developed a subtropical American Modern architecture in which simple volumes on daring structural armatures catch breezes and shade with operable flaps and filigree layers. During this period, Rudolph spent two formative semesters studying under Gropius at
Harvard, in a break from his training as a naval architect during the war years. In these first houses, remarkable for their small size and big ideas, shipwright economy and carpentry transform influences from Walter Gropius, Mies van der Rohe, and Frank Lloyd Wright.

The Healy Guest House in Siesta Key from 1950 exemplifies Rudolph’s work with Twitchell. Also known as the Cocoon House, it was built about the same time as Mies van der Rohe’s Farnsworth House and Philip Johnson’s Glass House, and like those, idealizes home as pavilion on an elysian plain, though swampy in this case. Reaching for a regional and emotionally imbued dialect of modernism, rather than hard-edged universal abstraction, Rudolph’s Cocoon House relaxes hammock-like with a catenary cable slung roof, and responds to Florida heat with floor-to-ceiling jalousies screening plate glass walls.

Joseph King’s essay covers the period 1952 to 1962, years of independent
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practice in which Rudolph changed rapidly, an itinerant high-energy star ascendant in fame and commissions, with offices in New York, New Haven, and Cambridge— as well as Sarasota. His work evolved, too. He first brought his Southern modernism to culmination with limpid clarity and refinement in beautiful structures such as the Walker Guest House and the Umbrella House for Phillip Hiss. Rudolph then began experimenting with a new highly personal idiom of dramatic external form, internal spatial complexity, and deep shadow.

King’s essay sketches through the mid-’50s architectural culture with which Rudolph synchronized perfectly. Central was the issue of monumentality in modernism, shared by Rudolph’s contemporaries Jose Luis Sert and Louis Kahn, and a recurrent theme in the early issues of Perspecta, the architecture journal of Yale, where Rudolph found a new base in the Northeast.

The Milam House in Ponte Vedra, Florida, from 1959, best illustrates the new direction Rudolph was heading. The arresting façade of concrete shadow boxes shows the influence of Le Corbusier, a heightened facility for exterior visual impact, and concern for the compression and release of interior space with changing floor levels and inglenooks. The Milam House, designed in Rudolph’s New Haven studio concurrently with the Yale Art & Architecture building, makes a fresh break in spirit and concept from Rudolph’s beginnings. Though highly influential, it was less regional, less Southern, and certainly a more difficult way to make a house. Interesting premonitions, these later houses outline ideas Rudolph went on to develop in subsequent significant commissions. They also remind that Rudolph excelled in the fine scale and wood technique of houses, with subtlety and grace lost in the larger scale and weightier materials of his later work.

Rudolph has long been remembered for overheating like Icarus and falling into a sea of bad luck through the 1970s. His overreach at the ill-fated State Services Building in Boston, fires at the Yale Art and Architecture building, Robert Venturi’s withering critique of the Crawford Manor housing project in New Haven— each doomed his “heroic and original” Modernism. The Florida Houses reminds us why Rudolph rose so rapidly and flew so high.

Robert J. Taylor, AIA, is a principal of Taylor & Burns Architects in Boston.
Architect: 3 North, Richmond
Project: Richmond Montessori School Classroom Addition

In adding two classrooms to the existing building, the new two-story addition presents a new face to Parham road while tying in to the existing forms and materiality of the school. Tel: 804-359-8984

Architect: Meditch Murphey Architects, Chevy Chase, Md.
Project: Goldberg Huson Residence

Covered with white stucco atop a finished concrete base and fitted with cedar shutters this 1,200-s.f. residential addition in Takoma Park, Maryland sits on the sunny side of a nicely proportioned brick bungalow. Tel: 301-657-9400 / www.meditchmurphey.com

Architect: BCWH, Richmond
Project: Lee Davis High School Career & Tech Center Addition/Renovation

This 20,000-s.f. project creates a state-of-the-art technology center, incorporating labs for CADD, graphic arts, and information technology, as well as a TV broadcast studio. The addition, framed in heavy-timber, will house an expanded bioenvironmental studies program. Tel: 804-788-4774

Architect: Mitchell/Matthews Architects and Urban Planners, Charlottesville
Project: Jefferson Green Multi-family Housing

Mitchell/Matthews Architects, in tandem with Neighborhood Investments, is designing Jefferson Green, a multifamily residential community in Albemarle Co. It will provide townhouses, apartments, commercial space, and parking in a traditional urban setting. Tel: 434-979-7550 / Info: cs@MitchellMatthews.com

On the Boards listings are placed by the firms. For rate information, call Inform at 804-644-3041.
Architect: SFCS Inc., Roanoke

Project: Fine & Performing Arts Building, Blue Ridge Community College

Designed to accommodate theater and studio arts, graphics and photography, this new 23,500-s.f. building also contains faculty offices and general classrooms. The black box theater will serve the local community as well as the college. Tel: 540-344-6664 / Info: tj@sfcs.com

Architect: Phillips Swager Associates, McLean

Project: U.Va. Health System, Infusion Center and Clinical Areas

The 5400-s.f. Infusion Center will include 17 infusion chairs, 7 private rooms, nurse support, a pharmacy, and a roof garden. Moveable walls will allow adjustments to the number of patients in an area, promoting a sense of community during the treatment phase. Tel: 703-748-1804

Architect: HSMM, Inc., Roanoke

Project: Jefferson Forest High School

The comprehensive renovation of this 1973 school includes a new 57,000-s.f. science wing; additions for performing arts, a gymnasium, and dining; a new standing seam metal roof; and modifications to site circulation patterns and athletic fields. The result is a 1400-student learning environment. Tel: 540-857-3257


Project: Philip Morris USA Corporate Headquarters

The 650-person Philip Morris Headquarters from New York City will relocate to the former Reynolds Metals Company headquarters in Richmond. The 245,000-s.f. project required architectural and interior design, MEP engineering, technology integration, and security design. Tel: 703-807-2500
On the Boards

Architect: Baskervill, Richmond
Project: Virginia Commonwealth University Health System, Pediatric Intensive Care Unit

This renovation transforms a utilitarian intensive care unit into a family-friendly environment. Warm colors, child-friendly finishes, artwork, and twinkling lights create a soothing, cheerful environment. Family lounge amenities include a living room, kitchen, laundry facility, and internet café. Tel: 804-343-1010

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The project is a 3,000-s.f. private residence, a condominium at the Ritz-Carlton in Miami, Florida. The living room is pictured. Tel: 202-332-2434
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Not far from the Dan River in South Boston rests the Prizery, an old warehouse where tobacco was ‘prized,’ or pressed by layers, into 1000-pound hogsheads during the heyday of tobacco agriculture in Virginia. But, as markets dwindled, the Prizery was abandoned. The landmark building sat unoccupied for decades, until in 1996 it was donated to the Community Arts Center Foundation. The foundation’s executive director, South Boston native Chris Jones, saw the opportunity to transform the building into a place for performances, exhibitions, and community meetings. He also envisioned it as a welcome center.

After scratching together $3 million in private and public contributions and securing $2 million in historic tax credits, Jones chose Norfolk architects Hanbury Evans Wright Vlattas & Company to reconfigure the Prizery’s interior without diminishing its ties to South Boston’s tobacco-fueled past. Although the 38,000-square-foot building offered ample space, it was a bare shell. The goal was to create multi-function spaces to be shared by a variety of users, along with a 326-seat theater, a 400-seat banquet hall, and a place to dispense tourist information.

Both the architects and the community ‘loved the aesthetic of the warehouse so much we didn’t want the design to dilute it,’ says project architect Greg Rutledge, AIA. The firm’s approach was to highlight the building’s sturdy timber frame by separating the new walls, electrical conduits, lighting, and other systems from it — allowing the interiors to read as a new layer while exposing the original fabric of the building. Artifacts such as an open lift elevator and a large scale recall the building’s former use. Wood flooring was reclaimed from South Boston’s old Damask Mill, providing another layer of local color. The use of such elements “has brought this building back to life in a way that respects it,” says Rutledge.

The first phase of the construction concluded with the opening last June of the lobby and a single function room, followed in September by a ribbon-cutting ceremony and inaugural exhibit on the history of South Boston’s tobacco industry. The remaining phase of the project is slated to open in 2005.

The Prizery is not alone — the surrounding Historic Tobacco Warehouse District is enjoying a revival, too. Peppered with new restaurants, boutiques, and specialty shops, as well as the Southern Virginia Higher Education Center, the district has been classified a ‘start-up community’ by the Virginia Main Street Program. As the cultural focal point in South Boston’s rejuvenated downtown, the Prizery makes a statement about both the town’s history and its burgeoning future.

— Rebecca E. Ivey
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